C E N T R A L

INSTRUMENTATION FACILITY

EMPOWERING RESEARCH.

ACCELERATING INNOVATION.

CENTRAL INSTRUMENTATION FACILITY

Advanced Analytical Infrastructure for Research, Innovation and Discovery

The Central Instrumentation Facility (CIF) at Galgotias University serves as a shared research infrastructure supporting advanced scientific investigation across pharmaceutical sciences, chemistry, biotechnology, materials science, food technology and allied disciplines.

The facility provides access to sophisticated analytical instrumentation required for molecular characterization, formulation development, material analysis, quality evaluation and translational research. By enabling access to advanced instrumentation within the University ecosystem, the CIF strengthens research capability, supports doctoral and postgraduate research, and facilitates interdisciplinary collaboration between academia and industry.

ABOUT GALGOTIAS UNIVERSITY

Galgotias University is one of India's leading multidisciplinary universities recognised for academic excellence, research, innovation, global collaborations, and industry aligned education. With a vibrant student community of over 50,000 learners and a global alumni network of more than 100,000 graduates, the University has built a rapidly growing ecosystem focused on technology, entrepreneurship, interdisciplinary learning, and real-world impact.

In the QS World University Rankings 2027 by Quacquarelli Symonds, Galgotias University was placed in the 1201-1400 global band and ranked 16th among private universities and 46th among all universities in India. In the Times Higher Education World University Rankings 2026, the University was placed in the 1201-1500 global band and ranked 27th among private universities and 65th among all universities in India. The University is also accredited with NAAC A+, one of India's highest institutional quality ratings.

Galgotias University offers programmes across engineering, artificial intelligence, computer science, semiconductors, business, law, media, design, health sciences, hospitality, liberal education, and emerging interdisciplinary domains. In 2026, students secured more than 5,500 job offers from over 1,250 recruiters. The University has built strong industry and innovation partnerships with organisations including Apple, Infosys, Intel, Cisco, Tata Technologies, L&T EduTech, Capgemini, and Salesforce, while continuing to strengthen its global academic engagement and startup ecosystem.

ABOUT THE DEPARTMENT OF PHARMACY

The Department of Pharmacy under the School of Medical and Allied Sciences offers programmes across pharmaceutical sciences with a strong emphasis on scientific rigor, practical training and research capability.

The department supports education and research across pharmaceutical chemistry, pharmaceutics, pharmacology, pharmaceutical analysis and regulatory sciences. Through modern laboratories, industry engagement and research-led teaching, students develop the analytical and scientific skills required for careers in pharmaceutical manufacturing, research and development, healthcare, regulatory affairs and academia.

THE CENTRAL INSTRUMENTATION FACILITY

Modern pharmaceutical and scientific research increasingly depends on access to sophisticated analytical technologies capable of generating reliable, reproducible and high-resolution data.

The Central Instrumentation Facility has been established to provide students, researchers and faculty members with access to advanced analytical infrastructure that supports experimental research, formulation development, molecular characterization and quality evaluation studies.

As a shared facility, the CIF promotes interdisciplinary collaboration while reducing barriers to high-end research instrumentation across the University ecosystem.

SUPPORTING RESEARCH ACROSS DISCIPLINES

Scientific research increasingly spans multiple domains and requires analytical techniques that extend beyond traditional disciplinary boundaries. The CIF supports this shift by enabling researchers from different fields to access common infrastructure and expertise.

The facility supports research activities across areas including:

- Pharmaceutical formulation and drug delivery
- Pharmaceutical analysis and quality assurance
- Natural products and phytochemistry
- Biomaterials and polymers
- Food and nutraceutical sciences
- Biotechnology and life sciences
- Materials characterization
- Regulatory and stability studies

ANALYTICAL CAPABILITIES

The Central Instrumentation Facility supports multiple stages of the research and product development life cycle, ranging from sample preparation and molecular characterization to stability testing and quality evaluation.

Its capabilities include:

- Molecular characterization and structural analysis
- Spectroscopic and chromatographic analysis
- Formulation development and optimization
- Dissolution and stability studies
- Thermal and rheological characterization
- Sample preparation and purification
- Quantitative and qualitative analytical testing

EXCELLENCE IN EVERY EXPERIMENT.

INSTRUMENTATION INFRASTRUCTURE

The CIF houses a broad portfolio of analytical instrumentation that supports teaching, research and industry-oriented investigations.

The facility includes:

- Fourier Transform Infrared Spectroscopy (FTIR)
- High Performance Liquid Chromatography (HPLC)
- UV-Visible Spectrophotometry
- Freeze Drying and Lyophilization Systems
- Tablet Dissolution Testing Systems
- Probe Sonication Platforms
- Refrigerated Centrifugation Systems
- Rotary Evaporation Systems
- Rheological Characterization Equipment
- Controlled Environment and Safety Infrastructure

FOURIER TRANSFORM INFRARED SPECTROSCOPY (FTIR BRUKER)

HIGH PERFORMANCE LIQUID CHROMATOGRAPHY

TABLET DISSOLUTION APPARATUS (EIGHT BASKET-LABINDIA)

COOLING CENTRIFUGE (REMI) INDIA

FOURIER TRANSFORM INFRARED SPECTROSCOPY (FTIR BRUKER)

FREEZE DRYER (LYOPHILIZER)

ROTARY EVAPORATOR

PROBE SONICATOR (PRO-650)

FTIR SHIMADZU

UV-VIS SPECTROPHOTOMETER (SHIMADZU)

BROOKFIELD VISCOMETER

INFRASTRUCTURE THAT INSPIRES INNOVATION

These technologies support analytical methods and workflows widely used across pharmaceutical research, formulation laboratories, quality control environments and scientific institutions.

LEARNING AND RESEARCH INTEGRATION

The facility forms an important component of postgraduate education, doctoral research and project-based learning within the School of Medical and Allied Sciences.

Students and researchers use the facility to design experiments, validate hypotheses, characterize materials and generate reliable scientific data that supports publications, dissertations and research projects.

The experience strengthens:

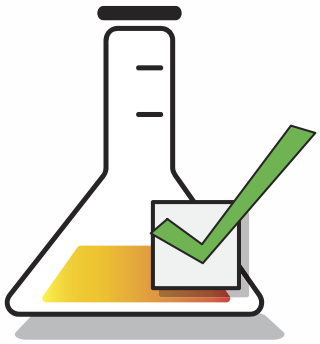
- Experimental design capability
- Laboratory practices and documentation
- Data interpretation and analytical reasoning
- Scientific communication
- Research methodology and validation techniques

INDUSTRY RELEVANCE

The analytical methods and instrumentation available within the CIF closely mirror those used across pharmaceutical manufacturing, research and development laboratories, contract research organisations and regulatory environments.

Exposure to these technologies strengthens the professional readiness of graduates pursuing careers in:

- Pharmaceutical research and development
- Analytical development
- Quality assurance and quality control
- Regulatory affairs
- Clinical research
- Biotechnology
- Academia and scientific research



DIGITAL RESEARCH TOOLS AND SCIENTIFIC COMMUNICATION

Scientific research increasingly requires competence not only in analytical methods but also in data analysis, digital tools and scientific communication.

The Department of Pharmacy regularly conducts workshops, training programmes and specialised schools that expose students and researchers to developments in pharmaceutical AI tools, scientific writing, drug design and emerging analytical methodologies.

These initiatives help researchers strengthen both technical capability and scientific communication skills required for contemporary research environments.

RESEARCH OUTCOMES AND IMPACT

The value of a research facility is measured not only by the sophistication of its equipment but by the quality of scientific work it enables.

The Central Instrumentation Facility contributes to publications, intellectual property generation, postgraduate dissertations, doctoral research and interdisciplinary collaboration across the University ecosystem.

The facility has supported:

- Patent generation and intellectual property filings
- Research publications
- Postgraduate dissertations
- Doctoral research projects
- Collaborative and interdisciplinary investigations

The existing facility has already contributed to the granting of more than 30 patents and several copyrights, demonstrating the role of shared research infrastructure in translating scientific investigation into tangible outcomes.

SUPPORTING RESEARCH EXCELLENCE

Scientific progress depends as much on access to high-quality infrastructure as it does on ideas and expertise.

The Central Instrumentation Facility at Galgotias University provides researchers with access to advanced analytical instrumentation, technical capability and a research environment that supports rigorous scientific investigation across pharmaceutical sciences and allied disciplines.

By strengthening analytical capability and enabling interdisciplinary collaboration, the facility contributes to publications, patents, funded research projects and translational outcomes that extend beyond the laboratory.

GALGOTIAS UNIVERSITY

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